
Solar on Sexton Mountain Fact Sheet and Frequently Asked Questions

Project Overview

The Sexton Mountain Water Storage Reservoir is a critical public asset, storing 15 million gallons of drinking water for over 69,000 Beaverton residents since 1994. The city's water pumping station adjacent to the reservoir is the largest electrical power user in the city's water system. The City of Beaverton is continuously looking for opportunities to increase its resiliency, protect critical assets, and use its resources efficiently. The Beaverton City Council authorized the installation of a 433 kW solar-panel array on top of the 320 foot diameter buried reservoir by Oak Leaf Energy partners through a power purchase agreement with Portland General Electric (PGE). This will allow the city to receive lower-cost electrical power rates and save taxpayer dollars, while utilizing solar energy to help offset the pumping of drinking water to residents on the west side of Cooper Mountain.

How much money will the project save the city and its taxpayers?

- From years 1 to 20, there is an estimated \$94,084 in total savings.
- From years 21 to 25, there is an estimated \$229,750 in total savings, with the assumption that the city purchases the system from Oak Leaf at a nominal cost after year 20.
- From years 26 to 35, there is an estimated \$519,318 in total savings.
- There is an estimated \$843,000 dollars in total savings for the estimated 35 year life of the project.

What is the construction timeline?

Currently, the construction is estimated to begin mid-February and be completed by May 1, 2015.

Is the top of the water reservoir a designated green space?

No. In 1992, the city acquired the 5.5-acre water reservoir property using city water utility funds collected from water customers with the intention of constructing a water reservoir and pump station. The city received land use approval for a buried 15-million gallon water reservoir in 1992. The land use approval required the reservoir to be buried and landscaped. The top of the reservoir was to be seeded with grass vegetation. The land use application did say that the area would be a park; however, no approval was given for the area to be a park. In 1996, Tualatin Hills Park and Recreation District (THPRD) received land use approval for the adjacent Sexton Mountain Park in its current location. The reservoir site was not included in the separate 1996 approval for a park. THPRD is the park service provider for the City of Beaverton. There is no agreement between the city and THPRD to use or maintain the reservoir site as a park or open space.

Were other sites considered?

The location for a solar installation depends on many factors including available open space, tree cover, security concerns, and nearby electrical energy demand. Other city sites were considered, and the Sexton Mountain Water Reservoir site had the most solar potential.

What is the required public outreach for a project like this?

The solar installation project on Sexton Mountain does not require any public outreach beyond what was conducted for the original land use decision in 1992. With that being said, engaging the public early and often is a value of the City of Beaverton. The public outreach to-date for the solar project on Sexton Mountain Water Reservoir is outlined below.

What public outreach has been done to-date?

- City project website established in September 2013: www.BeavertonOregon.gov/Sexton
- September 21, 2013: City staff visited 16 homes immediately bordering the installation site. Staff talked with resident's in-person and/or dropped off an invitation to an Open House to learn more about the project.
- September 23, 2013: City staff presented at the Beaverton Committee for Citizen Involvement
- October 7, 2013: An Open House was held at the site (the water pump station) from 5-7 p.m.
- October 10, 2013: Oregonian online article: http://www.oregonlive.com/beaverton/index.ssf/2013/10/sexton_mountain_reservoir_to_b.html
- October 15, 2013: City Council presentation entitled "Proposal to Place a Solar Array on Sexton Mountain Water Reservoir."
- January 21, 2014: City Council approved – consent agenda - Mayor authorized signing a lease and power purchase agreement with Oak Leaf Energy Partners.
- January 21, 2014: Oregonian online article: http://www.oregonlive.com/beaverton/index.ssf/2014/01/beaverton_city_council_says_ye.html
- December 13, 2014: City staff visited 16 homes to drop off construction notice to begin January 5, 2015.
- December 30, 2015: Invitation to public meeting and FAQ sheet mailed to over 250 residents in Sexton Mountain area
- January 12, 2015: Public meeting held at 7pm. 15 attendees.

How will security be addressed?

The Sexton Mountain reservoir and pumping station were completed in 1994 as part of the city's drinking water system. After the terrorist events of 9/11/01, the city was required to increase security and protection of the potable water system infrastructure. Increased electronic monitoring and physical security was added to the site a few years later, and the city has continuing obligations to maintain security. The planned security fence around the reservoir and pump station will serve to improve physical security of the enclosed infrastructure, including the new solar-panel array, as well as reduce the risk of water contaminants that could reach the 15 million gallons of drinking water stored in the reservoir. Additionally, the Beaverton Police Department have agreed to increase night patrolling in the area immediately following construction.

What will the fence look like?

Currently, a six foot (6') black, vinyl-covered, chain link fence is proposed.



How will graffiti and vandalism be addressed?

The city is aware of the periodic graffiti that occurs on the existing retaining wall, and city Public Works Department Operations staff will continue to be responsible for graffiti removal. The planned chain link security fence doesn't lend itself to tagging and will also help curb another occasional pastime for vandals—throwing rocks from the top of the reservoir at the roof of the pump station.

How will the site be maintained?

While no new landscaping is proposed on top of the reservoir, City of Beaverton Public Works Department Operations staff will continue to maintain any landscaping and paved surfaces on city property (inside or outside of the fence). Oak Leaf Energy Partners is responsible for the operations and maintenance of the solar panel system, including any vandalism that may occur to the solar panels.

How is this project being paid for? Have city staff participated in the solar array project design?

In 2013, the City of Beaverton was awarded \$355,420 by the Energy Trust of Oregon to enter into a Power Purchase Agreement (PPA) with a solar vendor. A PPA allows a solar contractor to site the project on city land, and in exchange the city receives long-term, lower electrical power rates to operate the City's water pumping station. City engineers have provided surveying and engineering services to assist Oak Leaf Energy Partners with the layout of the solar panels on the top of the reservoir, a 12-foot wide gravel access road around the outer edge of the buried reservoir roof, and layout of the security fence around the reservoir and pump station perimeter so that long term operation and maintenance access is preserved and enhanced.

What will the project look like and what is the project footprint?

Updates visuals and plans will be posted on the city website at:

<http://www.BeavertonOregon.gov/Sexton>

What are the impacts on citizens and neighbors?

Residents immediately bordering the water reservoir site will notice a visual landscape change from the current open space to solar panels. Residents who currently use the area as an unofficial dog park and/or field will also lose this function. No additional site lighting is proposed as part of the project. Because this site is a critical city asset used to provide drinking water to over 69,000 Beaverton residents, the city has made the decision to protect the site with a security fence and use the high-value property for solar panels to offset electricity costs from the adjoining water pumping station.

Will there be glare from the solar panels?

Solar photovoltaic (PV) panels are designed to minimize glare. These types of panels are meant to absorb the sun and not reflect it. To limit reflection, solar PV panels are constructed of dark, light-absorbing materials and covered with an anti-reflective coating. Today's panels reflect as little as 2 percent of the incoming sunlight depending on the angle of the sun and assuming use of anti-reflective coatings.



What are the stakes north of the city's water pump station building?

The city's surveyor located the reservoir property corners and placed some temporary stakes with pink flagging along the north property line. The staking is a property reference that will allow for final field location of the perimeter security fence and ensure the proposed fence alignment will not obstruct existing paved access paths or Tualatin Hills Park Recreation Department (THPRD) park operations and maintenance.